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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,456	02/17/2004	John Quigley	RMC-6673	1400
26294	7590	12/01/2006	EXAMINER	
TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P.			ADDISU, SARA	
1300 EAST NINTH STREET, SUITE 1700			ART UNIT	
CLEVEVLAND, OH 44114			PAPER NUMBER	
			3722	

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,456

Applicant(s)

QUIGLEY, JOHN

Examiner

Sara Addisu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 54-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 54-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the amendment filed 8/16/06. New claims 55-64 have been added. Currently, claims 1-17 and 54-64 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, 6, 8, 12, 13, 54, 56 and 61-64, are rejected under 35 U.S.C. 103(a) as being unpatentable over Horn et al. (USP 4,205,569) in view of Scott (USP 1,967,374).

HORN ET AL. teaches tube cutting apparatus capable of simultaneously cutting multiple segments from a continuous length of tubing ('569, figure 1 and Col. 1, lines 5-7). HORN ET AL. also teaches long tubing (T) having its leading end (first portion) being advanced longitudinally from the feeding section to the workstation and after the shearing operation, the second portion of the tubing (T)

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is advanced to be cut ('569, Col. 6, lines 18-49). The cut segments from tubing (T) are directed to a receiving location via chute-like tray (second receiving location) (214). Regarding claim 2, cutting the leading end of tubing (T) obviously forms an end surface (leading end) on the second portion of the tube. Regarding claim 3, since tubing (T) is cut in segments (i.e. first portion then second), by default the force transmitted to the first portion comes from the second portion (tail end of the tube).

However, HORN et al. fails to teach a scrap section disposed at the end of tube (which is directed to a receiving location that is different than where the plurality of sections are directed). HORN et al. also fails to teach a stop surface. Furthermore, HORN et al. fails to teach a mandrel.

SCOTT teaches a method of cutting a tube into plurality of sections comprising feeding tube (55) along its longitudinal axis from the feeding zone (right hand portion of the tool) to the cutting zone (left hand portion of the tool) to be cut into smaller tubes segments ('374, figure 1). SCOTT also teaches a trimmed portion/scrap (86) disposed at the end of tube (55) being ruptured and removed (to a scrap receiving location) by spring (87) ('374, figure 8 and page 3, lines 50-65). Furthermore, SCOTT teaches the tube segments falling on conveyor belts to be ejected to a chute (second receiving location) (116) ('374, page 3, lines 130-133). Regarding claims 8 and 12, SCOTT teaches the tube being slipped onto the mandrel (8) (i.e. they have a telescopic relationship). SCOTT also teaches the mandrel (8) being constantly rotated and the tube is rotated with the mandrel (tube rotated at same speed as mandrel) during cutting

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of the tube ('374, Page 2, lines 11-24). Regarding claim 13, SCOTT teaches tube carriage (42) being mounted for longitudinal movement via oscillation lever (22) ('374, page 2, lines 98-107). Regarding claim 4, SCOTT teaches the steps of pressing the end of the first portion of the tube against a stop surface (clamping member, 70) with the stop surface in a first position (clamped being down/closed) during cutting of the first portion of the tube into a first plurality of sections, moving the stop surface to a position (clamp opened) spaced from the first position, said step of cutting the second portion of the tube includes pressing an end of the second portion of the tube against the stop surface with the stop surface ('374, figure 7) (note: Meriam-Webster online dictionary defines "against as: in contact with).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Horn et al's invention such it incorporates a trimming device, as taught by Scott, for the purpose of tubes usually have rough ends therefore it is necessary to sever the end to be sure that the cut piece does not have this defect thus avoid the potential of buffing the ends of the cut pieces ('374, page 3, lines 53-57).

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2. Claims 9, 10 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horn et al. (USP 4,205,569) in view of Scott (USP 1,967,374) and further in view of Braun et al. (USP 5,894,771).

The modified device of HORN ET AL. teaches tube cutting apparatus capable of simultaneously cutting multiple segments from a continuous length of tubing, as set forth in the above rejection.

However, the modified device of HORN ET AL. is silent about varying the feed rate of the tube.

Braun et al. teaches pipe cutting machine having CNC-controlled feed unit, which effortlessly controls with high precision the feed steps ('771, col. 3, lines 59-67 and col. 4, lines 61-62). Braun et al. also teaches the possibility of adapting optimally the acceleration and speed of the pipe blank ('771, col. 9, lines 61-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Horn et al. such that it incorporates a CNC-controlled feed unit, as taught by Braun et al. for the purpose of adjusting the stepwise feed advance and/or the cutting velocity to the type of material forming the pipe blank for obtaining a rapid cutting of the pipe ('771, col. 2, lines 58-60).

3. Claims 5, 7, 11, 14-17 and 57-60 are rejected under 35

U.S.C. 103(a) as being unpatentable over Horn et al. (USP

4,205,569) in view of Scott (USP 1,967,374) and further in view of

Harris (USP 4,671,150).

The modified device of HORN ET AL. teaches tube cutting apparatus capable of simultaneously cutting multiple segments from a continuous length of tubing, as set forth in the above rejection.

However, the modified device of HORN ET AL. fails to teach the tube being rotated while being fed. SCOTT also fails to teach feed rollers (that rotate about an axis that is skewed relative to the longitudinal axis of the tube).

HARRIS teaches an apparatus and method for cutting a pipe into a multiplicity of small pieces wherein the pipe is fed by rotating the pipe about its longitudinal axis and simultaneously moving the pipe in a direction generally parallel to the longitudinal axis of the pipe, and wherein individual pieces are sequentially cut from an end of the pipe as it is being fed ('150, abstract).

HARRIS also teaches feed rollers (10, 12 and 14) ('150, figure 1). Regarding claims 16, 17 and 57-60, HARRIS teaches each roller being mounted in any convenient manner so as to be capable of free rotation about a rotational axis,

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and is skewed with respect to the longitudinal axis of pipe (16) to form an acute angle α ('150, figure 1 and Col. 2, lines 3-22). Furthermore, HARRIS teaches the skew angle at which the rollers are set is preselected, and is determined according to the desired distance of longitudinal pipe travel per revolution, the distance traveled being a function of the pipe diameter ('150, Col. 2, lines 23-26). Additionally, HARRIS teaches the longitudinal velocity of the pipe is a function of pipe diameter, the feed roller rotation rate and feed roller skew angle ('150, Col. 4, lines 23-25). Regarding claim 7, rotating the feed rollers (10, 12, 14) reversely would result in the tube being pulled back into the feeding station.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to substitute the feeding assembly of Horn et al.'s invention with feed rollers, as taught by HARRIS, for the purpose of simplifying the tool thus cutting cost. This means there would be no need for the oscillating lever (22) and carriage (42) while being capable of advancing the tube longitudinally to the workstation. It would have also been obvious to one of ordinary skill in the art at the time of the invention was made to skew the feed rollers (in different reselected angles) as taught by HORN ET AL., for the purpose of serving to impart to the pipe simultaneous rotational and longitudinal movement in respective directions as well as control the longitudinal velocity of the pipe ('150, Col. 2, lines 19-21 and Col. 4, lines 23-25).

Response to Arguments

4. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Examiner thanks Applicant for the thorough clarification of Scott's invention. However, in response to Applicant argument (pages 25+) that, "The tube feeder and cutter of Scott requires a positive feeding action to insure a secure frictional engagement of the tube end (55 fig. 14) and the beveled segment (9 fig. 15). A friction clamp may not be repeatedly relied on.....Secondly, any unanticipated frictional resistance between the mandrel and the tube during the loading of the tube can cause the clamp to slide or slip on the tube surface thereby destroying a necessary dimensional relationship between the first end of the tube and the beveled flange (9) on the mandrel at the completion of the loading cycle (Fig. 8). Thirdly, the use of the beveled flange of Scott may not be sufficient even for a moderately high-speed tube cutting operation....", Examiner respectfully points out that Applicant is inferring additional structure from the phrase "receiving a scrap which is disposed on an end of the first portion of the tube". This phrase is merely a functional/intended use statement not defining any specific structure. It should be noted that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. The only requirement is that the prior art reference be capable of said intended use. See MPEP 2114. In this case, (Scott

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'374) is fully capable of cutting a scrap portion from an end of a tube, regardless as to how well it performs.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Carter can be reached on (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SA
11/25/06

Monica S. Carter
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